

COURSE OUTLINE - Mathematics 2122B - Real Analysis I

Location and Times: TuTh 1:30-3:30 from Jan 7 to Apr 2, 2020 in AHB 1B08

Prerequisites: Calculus 1501A/B or Applied Mathematics 1413, with a minimum mark of 60%, or Calculus 1301A/B with a minimum mark of 85%.

Instructor Information: Gord Sinnamon (sinnamon@uwo.ca), Professor, Department of Mathematics.

Course Description: A rigorous introduction to analysis on the real line. Sets and functions, logic and mathematical proof, the natural and real numbers, completeness and its consequences, limits of sequences, limits of real functions, continuity and uniform continuity.

Textbook: Real Analysis, Foundations and Functions of One Variable, by Laczko and Sos, Springer, New York 2015. This is a free download from Western Library: Click [HERE \(https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL_UWO/ke1g0j/alma992711365605151\)](https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL_UWO/ke1g0j/alma992711365605151) and follow the link in the "Full text availability" box. You will have to log in to use the proxy server if you are off campus.

Coursework: Students are expected to attend all lectures and complete all tests, assignments, and examinations. No aids are permitted in tests and examinations. Regular homework is an essential part of the course; it is the student's responsibility to keep up with the assigned homework and to seek additional help if and when it is needed.

Evaluation: Assignments 20%, Tests 40%, Final Examination 40%. There will be six assignments tentatively due on Jan 21, Feb 4, Feb 25, Mar 3, Mar 17, and Mar 24. There will be two in-class tests tentatively scheduled for 1:30-3:20 on Feb 6 and Mar 5. The final examination will be held during the examination period in April, as scheduled by the Registrar's office.

Absences: If you miss or expect to miss a lecture, an assignment deadline, an in-class test, or the final examination, contact Gord Sinnamon as soon as possible. Approved absences will be accommodated.

Link to the website for Registrarial Services: <http://www.registrar.uwo.ca>. Link to learning skills services at the Student Development Centre: <http://www.sdc.uwo.ca>.

Link to policy on Accommodation Consideration for Student Absences:

www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf (which includes a link to the Student Medical Certificate). Link to the policy on Accommodation for Students with Disabilities: www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf. Link to the policy on Accommodation for Religious Holidays www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf. Responsibility for checking prerequisites: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites. Statement on academic offences: Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf. Statement on services for students in emotional/mental health distress: Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help. Accessibility statement: Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program. Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are encouraged to register with Student Accessibility Services, a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both SAS and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction. Refer to <http://www.sdc.uwo.ca/ssd/>.